CLAIMS

1. An air separation unit comprising a system of columns (MPC, LPC, MC), means for feeding the unit at least partly with compressed air coming from at least one booster compressor (C1, C2), means (PU, EL) for purifying and cooling the air, means for sending it to one column (MC, MPC) of the column system and means for withdrawing a gaseous product (O) from one column of the column system, characterized in that the booster compressor is driven by a variable-speed motor (M, M') having at least two nominal rotation speeds and characterized in that it includes means for supplying the motor with a variable-frequency AC current.

2. The unit as claimed in claim 1, which includes a multi-speed motor (M, M').

3. The unit as claimed in claim 1 or 2, in which the motor (M, M') is of the type having a single primary winding, in particular a Dahlander winding, or of the type having several primary windings.

4. An integrated air-separation/metal-production installation comprising an air separation unit, a metal production unit (BF), a main compressor (C) that compresses air intended for the air separation unit and air intended for the metal production unit, the air separation unit being as claimed in one of claims 1 to 3, means for sending air from the main compressor to the booster compressor (C1, C2) and means for sending the gaseous product (O) coming from the air separation unit to the metal production unit.

5. A method of starting up an air-separation/metal-production installation comprising a system of columns, means for feeding a booster compressor (C1, C2) with compressed air and means for sending air from the booster compressor to at least one column (MPC, MC) of the column system and means for withdrawing a gaseous product (O) from one column of the column system in order to send it to the metal production unit, the booster compressor being driven by a variable-speed motor (M, M'), characterized in that, during a startup period of the metal production unit, the speed of the motor is higher than the speed of the motor during steady operation of the unit.

6. The method as claimed in claim 5, in which the motor (M, M') turns at one of the two speeds, the motor turning at a first speed during startup of the metal production unit (BF) and at a second speed during steady operation of the unit, the first speed being higher than the second speed.

7. The method as claimed in claim 6 in which the motor is supplied with AC current at a higher frequency during startup of the metal production unit (BF) than the frequency of the current during steady operation of the unit.

8. The method as claimed in claim 7, in which the frequency of the current is variable.

9. The method as claimed in claim 7, in which the motor (M, M') comprises several windings differently coupled depending on the operation of the unit.

10. The method as claimed in one of claims 5 to 9, in which an air separation unit and a metal production unit (BF) are fed with air from a main

compressor (C) and the metal production unit is fed with a gaseous product (O) from the air separation unit, in which method the main compressor (C) that feeds the two units is started first and then the air separation unit as claimed in one of claims 6 to 10 is started.